

## Scenery Treatment Guide - Southern Regional National Forests

### April 2008

**Introduction:** The objectives of the Scenery Treatment Guide are two-fold: to help managers meet Forest Land and Resource Management Plan direction pertaining to Scenery Integrity Objectives (SIOs) and to determine what treatments should be used to mitigate scenery impacts in applicable prescription areas during environmental analysis of project implementation and sale design.

The Guide is intended to help achieve Scenic Integrity Objectives and desired conditions during project planning. The Guide is not a commitment or final decision that compels action, nor does it approve or prohibit projects and activities. However, once the selected treatments are listed in the approved project-specific NEPA document, they become a requirement for implementing that project.

In the past, Forest Scenery resource managers used forest-specific guidelines to help meet Visual Quality Objectives (VQOs) established through Forest Land and Resource Management Plans. In addition, guidelines were published on a national basis in the *National Forest Landscape Management* handbook series, particularly in volume 2, chapter 5: *Timber*. During development of the Southern Appalachian National Forests' Land and Resource Management Plans, it was determined that there continued to be a need to compile uniform guidance for meeting Scenery Integrity Objectives (SIOs). The Southern Appalachian Recreation Resource and Wilderness Analysis Group (SARRWAG) Forest Plan revision team compiled the Scenery Treatment Guide to ensure that the SIOs in the new Forest Plan Revisions are successfully met and to act as proactive measure to enhance our outstanding forest landscapes.

The Guide offers a listing of management activities and various treatment clauses that may be used to meet the Forest Plan management direction for SIOs. The listing of Management Treatments and Management Activities is not all-inclusive. It is also not to be used as a cookie cutter for automatically determining which treatments should be applied. Each project may have unique conditions that would need to be considered. All treatments may not apply.

This guide is dynamic; it will evolve as managers continue to learn from the results of applying these treatments. New practices affecting forest scenery may emerge, and as they do, new treatments to mitigate their effects are expected to be added to the guide.

The first draft of the Region's Scenery Treatment Guide was initiated on the George Washington and Jefferson National Forests by an interdisciplinary team that included Ranger District and Supervisor's Office personnel. It also borrowed from previous work done over the years by the Kisatchie National Forest, George Washington and Jefferson National Forests, and others. Initial drafts were reviewed, as well, by Regional Office timber, wildlife and recreation staff personnel. The final guide has been reviewed by all Forests and Regional Office Resource and Planning Staffs.

Specific SIO direction for *Very High* has not been included in this Guide because it is felt that treatments for these significant landscapes must be developed with the advice of the Forest Landscape Architect at the time of project analysis. It is also believed that all treatments apply to all Physiographic Sections and Landscape Character Themes. No specific direction was developed for "Forest Health" management, with the assumption that various listed treatments can be applied on a case-by-case basis.

**Techniques to Achieve  
Scenic Integrity Objectives and Landscape Character  
in Southern Region National Forests  
(Portrait Version)**

Topic or Management Activity	Scenery Treatments by Scenic Integrity Objective (SIO)			
Management Activities	Very High	High	Moderate	Low
Clearcutting	<b>Consult landscape architect for any projects in areas with Very High SIOs</b>	*	B, D, E, G, H, I, L, O, P, T, V, W, AA	N, T, V, W, AA
Commercial/Non-Commercial thinning		A, B, C, D, E, F, G, H, I, S, T, V, W, Y, AA	B, D, E, G, H, I, S, T, V, W, AA	B, T, V, W, AA
Coppice with reserves		*	B, D, E, G, I, M, O, P, S, T, V, W, AA	B, N, S, T, V, W, AA
Create Field Successional Variety and Open Areas		A, B, C, D, E, F, G, H, I, L, O, P, S, T, U, V, W, Z	B, D, G, H, I, L, O, P, S, T, U, V, W, Z	B, N, S, T, V, W
Create Openings for Viewing Wildlife		A, B, E, F, G, M, S, T, V, W, Z	B, E, G, S, T, V, W, Z	B, T, V, W
Create Parklike/Savannah Effect in Forest Stands		A, B, C, D, E, F, G, H, I, S, T, U, V, W, X, Y, AA	B, D, E, G, H, I, S, T, U, V, W, AA	T, V, W, AA
Create/Enhance Scenic Environment in Developed Recreation Sites		A, B, D, E, F, G, H, R, S, T, U, V, W, X, Y, Z	B, D, E, F, G, H, R, S, T, U, V, W, X, Y, Z	* Recreation Areas normally not applicable to this SIO
Create/Maintain Wildlife Habitat, Restore PETS and Native Communities		B, D, E, G, H, I, K (creating), M(restoring), N(maintaining), T, V, W, AA	B, D, E, G, H, I, N, T, V, W, AA	B, D, H, T, V, W, AA
Create Spatial Diversity/Variable Density Vegetation		A, B, C, D, E, F, G, H, I, J, O, S, T, V, W, Y, Z, AA	B, C, D, E, F, G, I, L, M, O, P, R, S, T, U, V, W, Y, AA	N, S, T, V, W, AA
Create Vistas		A, B, D, E, F, G, H, T, U, V, W, X	B, D, E, F, G, U, V, T, W, X	B, T, V, W
Create Visual Mosaic of Vegetation Along Travelways and Watercourses		A, B, C, D, E, F, G, H, I, J, Q, S, T, U, V, W, Z, AA	B, C, D, E, F, G, H, I, L, Q, S, T, U, V, W, Z, AA	B, E, G, N, S, T, V, W, AA
Decrease Visual Impacts of Utility Corridors		* Utility corridors normally not applicable to this SIO B, C, D, E, F, Q, R, S, T, U, V, W	B, C, D, E, F, Q, R, S, T, U, V, W	E, Q, R, S, T, U, V, W
Group Selection		A, B, C, D, E, F, G, H, I, J, T, U, V, W, AA	B, D, E, G, H, I, K, T, U, V, W, AA	B, K, T, U, V, W, AA
Overstory Removal Seed-Tree Removal/		B, C, D, E, F, G, H, I, O, P, Q, S, T, V, W, AA	B, D, G, H, I, O, P, Q, S, T, V, W, AA	Q, S, T, V, W, AA

Topic or Management Activity	Scenery Treatments by Scenic Integrity Objective (SIO)			
Management Activities	Very High	High	Moderate	Low
Shelterwood Removal				
Permanent Road Construction/Reconst.	Consult landscape architect for any projects in areas with Very High SIOs	B, C, D, E, F, G, H, I, Q, R, S, T, U, V, W	B, C, D, E, G, H, I, Q, R, S, T, U, V, W	Q, R, S, T, U, V, W
Prescribed Burn		D, E, F, H	D, E, H	H
Reduce Visibility of Communication/Electronic/Utility Tower Structures and Corridors		* A, B, C, D, F, G, H, I, R, S, T, U, V, W	B, C, D, E, F, H, I, R, S, T, V, W	B, E, I, S, T, R, V, W
Roadside Maintenance		B, F, G, H, T, U, V, W, X, Z	B, F, G, T, U, W	T, U, V, W
Salvage		B, C, D, E, F, G, H, I, T, V, W, AA	B, D, E, G, I, T, V, W, AA	B, T, V, W, AA
Seed-Tree		*	B, D, E, G, I, M, O, P, Q, T, V, W, AA	B, N, Q, T, V, W, AA
Shelterwood		*	B, D, E, G, I, M, O, P, Q, T, V, W, AA	B, N, Q, T, V, W, AA
Shelterwood (w/reserves)		*	B, D, E, G, I, M, O, P, Q, T, V, W, AA	B, N, Q, T, V, W, AA
Single-Tree Selection		A, B, C, D, E, F, G, H, I, T, U, V, W, AA	B, D, E, G, H, I, T, U, V, W, AA	B, T, U, V, W, AA
Temporary Road/Skid Trail Construction		B, C, E, G, H, I, T, U, W, AA	B, E, G, H, I, T, U, W, AA	B, T, U, W, AA
Two-aged Harvest		*	B, D, E, G, I, M, O, P, T, V, W, AA	B, N, V, T, W, AA
Trails Construction. Rehabilitation, Reconstruction		A, B, D, E, F, H, Q, S, V, W, Z, AA	B, D, E, F, H, Q, S, V, W, Z, AA	B, D, E, F, H, Q, V, W, AA

## List of Treatment Clauses

- \* Not always appropriate in areas with this SIO. Consult landscape architect.
- A. Trees should be selectively removed to improve scenery within high use areas, vista points, and along interpretive trails.
- B. Flowering and other visually attractive trees and understory shrubs should be favored when leaving vegetation.
- C. During temporary or permanent road construction, slash and root wads should be eliminated or removed from view in the immediate foreground to the extent possible. Slash may be aligned parallel to roads at the base of fill slopes to collect silt, but usually only if it provides this function.
- D. Slash should be removed, burned, chipped or lopped to within an average of 2 feet of ground, when visible within 100 feet on either side of Concern Level 1 travel routes. Slash should be treated to within an average of 4 feet of the ground when visible within 100 feet on either side of Concern Level 2 travel routes. Removal of all slash or other special slash treatments may be considered for certain Concern Level 1 travel routes or trails where the SIO is Very High or High.
- E. Root wads and other unnecessary debris should be removed or placed out of sight within 150 feet of key viewing points.
- F. Stems should be cut to within 6 inches of the ground in the immediate foreground.
- G. Leave tree marking or unit boundary marking should be applied so as to not be visible within 100 feet of Concern Level 1 and 2 travel routes.
- H. Consider scheduling work outside of major recreation seasons.
- I. Special road and landing design should be used. When possible, log landings, roads and bladed skid trails should be located out of view to avoid bare mineral soil observation from Concern Level 1 and 2 travel routes.
- J. An actual opening size of up to 1.5 - 2 acres may be appropriate, based on desired landscape character.
- K. An actual opening size of up to 5 acres may be appropriate, based on desired landscape character.
- L. An actual opening size of up to 10 acres maybe appropriate in the foreground zone and up to 25 acres in middleground and background zones in Concern Level 1 and 2 travel routes.
- M. An actual opening size of up to 25 acres with inclusions may be appropriate.
- N. An actual opening size of up to 40 acres with inclusions may be appropriate. Larger openings may occur in certain forest types based on specific Forest Plan direction.
- O. Along Concern Level 1 and 2 travel routes, harvest units (or openings) in contiguous woodland should be spaced no closer than 1000 feet apart next to the travelway.

- P. Along Concern Level 1 travel routes, openings of up to 200 linear feet may be appropriate. Along Concern Level 2 travel routes, openings of up to 400 linear feet may be appropriate.
- Q. Removal of overstory should be delayed until understory is approximately one-third the height of the adjacent stand.
- R. Utility rights-of-ways should be located and maintained to conform with natural-appearing patterns of vegetation to the extent possible.
- S. Overhead utility lines and support towers should be screened where possible. Structures should have finishes that reduce contrast with the desired landscape character.
- T. The visual impact of roads and constructed fire lines should be blended so that they remain subordinate to the existing landscape character in size, form, line, color, and texture.
- U. Gravel pits, borrow areas, open pit mines and restored gullies should be excluded from the seen area of visually sensitive travelways and viewing points to the extent possible.
- V. Openings and stand boundaries should be organically shaped. Straight lines and geometric should be avoided. Edges should be shaped and/or feathered where appropriate to avoid a shadowing effect in the cut unit. Openings should be oriented to contours and existing vegetation patterns to blend with existing landscape characteristics, as appropriate.
- W. Cut and fill slopes should be revegetated to the extent possible. In seen areas, consider seasonal color of vegetation. For instance, using warm season grass mixes that turn seasonally brown or gray instead of green. Cut banks should be sloped to accommodate natural revegetation.
- X. Mowing or bush hogging should be accomplished prior to herbicide treatment.
- Y. A range of stem diameters should be provided but 14 inch and larger stems in a mixture with other smaller sized tree stems should be favored.
- Z. Native wildflowers and/or shrubs and/or trees with showy flowers and/or fruits should be favored or introduced.
- AA. Impacts to forest trails should be minimized. Trail-related mitigations can include all or portions of the following: Temporary road and/or skid trail crossings across designated forest trails should be kept to a minimum. Any crossings should be perpendicular to designated forest trails. Using segments of designated forest trails as skid trails/haul roads should be avoided, as much as possible. If trails are used as skid trails/haul roads, specify trail cleanup/rehabilitation should be specified at the end of the contract. Trail width should not be increased. Character trees and trees that define the trail corridor should be retained. Changes to trail alignment and surfacing should be minimized; the trail should not be straightened nor should its surface be changed with an alternate material unless such actions are needed to enhance the trail and protect resources. Warning signs should be placed on all trail access points and along the trail where activities are occurring. When activities are occurring along open trails, slash should be treated within 100' of the corridor, either daily or another agreed on time period (check with recreation specialist). If trails are temporarily closed due to harvesting, trail tread should be cleared of all slash prior to reopening that section for public use. Slash should be treated to an average of 4 feet from the ground within 100' of the corridor prior to finalizing harvesting activities in the affected unit.

## Glossary:

Silvicultural terminology taken from the Society of American Foresters' The Dictionary of Forestry (Helms 1998); the recognized source for silvicultural terminology and definitions. Those with \* were developed by R8, Regional Office Recreation Guide Development Team.

Abundance. The number of organisms in a population, combining density within inhabited areas and number and size of inhabited areas.

Cleaning. 1. A release treatment made in an age class not past the sapling stage to free the favored trees from less desirable individuals of the same age class that overtop them or are likely to do so (see improvement cutting, liberation, weeding). 2. A treatment designed to eradicate individual trees infected with diseases such as dwarf mistletoe.

Clearcut. 1. A stand in which essentially all trees have been removed in one operation. Note – depending on management objectives, a clearcut may or may not have reserve trees left to attain goals other than regeneration (see regeneration method (two-aged methods). 2. A regeneration or harvest method that removes essentially all trees in a stand.

Clearcutting Regeneration Method. The cutting of essentially all trees, producing a fully exposed microclimate for the development of a new age class. Note 1 – Regeneration can be from natural seeding, direct seeding, planted seedlings, or advance reproduction. Note 2 – Cutting may be done in groups or patches (group or patch clearcutting), or in strips (strip clearcutting). Note 3 – The management unit or stand in which regeneration, growth, and yield are regulated consists of the individual clearcut stand. Note 4 – When the primary source or regeneration is advance reproduction, the preferred term is overstory removal.

Clearcutting Regeneration Method with Reserves. A clearcutting method in which varying numbers of reserve trees are retained to achieve goals other than regeneration. This method may produce a two-aged stand in which varying numbers of reserve trees are not harvested. If a minor, live component is left for snag replacement, the method is considered a clearcut method rather than clearcut with reserves.

Coppice Regeneration Method. An even-aged method of regenerating a stand in which the trees in the previous stand are cut and the majority of regeneration is from sprouts or root suckers.

Coppice Regeneration Method with Reserves. A coppice regeneration method in which reserve trees are retained to attain goals other than regeneration. This method normally creates a two-aged stand. If a minor, live component is left for snag replacement, the method creates an even aged stand.

Density. The size of a population in relation to some unit of space. Density is usually expressed as the number of individuals or the population biomass per unit area or volume.

Even-aged Methods. Regeneration and maintenance of a stand with a single age class.

Even-aged Stand. A stand of trees composed of a single age class in which the range of tree ages is usually plus or minus 20 percent of rotation.

Even-aged System. A planned sequence of treatments designed to maintain and regenerate a stand with one age class. The range of tree ages is usually less than 20 percent of the rotation (see clearcutting, seed-tree, shelterwood, and coppice regeneration methods).

Group Selection Regeneration Method. A method of regenerating uneven-aged stands in which trees are cut, in small groups, and new age classes are established. The width of groups is commonly approximately twice the height of the mature trees, with small openings providing micro-environments suitable for tolerant regeneration and the larger openings providing conditions suitable for more intolerant regeneration. In the group selection regeneration method, the management unit or stand in which regeneration growth and yield are regulated consists of a landscape containing an aggregation of groups.

Harvest Activity. A reference to a specific type of cut applied under a regeneration method or intermediate treatment. Refer to the TRACS-SILVA Table S1020 for valid codes or FACTS Activity Codes (After FY 05).

Improvement Cutting. An intermediate treatment made in a stand pole-sized or larger primarily to improve composition and quality by removing less desirable trees of any species.

Intermediate Treatment. A collective term for any treatment or tending designed to enhance growth, quality, vigor, and composition of the stand after establishment or regeneration and prior to final harvest.

Liberation Cut. A release treatment made in a stand not past the sapling stage in order to free the favored trees from competition of older, overtopping trees.

Overstory Removal. The cutting of trees comprising an upper canopy layer in order to release advance regeneration in an understory. Overstory removal is only applicable to the clearcutting regeneration method and only when the primary source of regeneration is advance reproduction.

Patch (Group) Clearcutting. Under an even-aged method, a modification of the clearcutting method where patches (groups) are clearcut in an individual stand boundary in two or more entries. Under a two-aged method, varying numbers of reserve trees are not harvested in the patches (groups), to attain goals other than regeneration.

Preparatory cut. An optional type of cut that enhances conditions for seed production and establishment applied under the shelterwood regeneration methods.

Regeneration Method. A cutting procedure by which a new age class is created. The major methods are clearcutting, seed-tree, shelterwood, selection, and coppice. Regeneration methods are grouped into four categories: coppice, even-aged, two-aged, and uneven-aged.

Reforestation Treatment. A reference to a specific reforestation activity used to establish reproduction in a stand. Treatments include planting, direct seeding, site preparation for

natural reproduction (regeneration), or natural regeneration without site preparation. These treatments typically start at the beginning phases of a regeneration method, such as: clearcutting, clearcutting with reserves, overstory removal, seed-tree, seed-tree with reserves, shelterwood, shelterwood with reserves, coppice, coppice with reserves, single-tree selection, and group selection.

Release. A treatment designed to free young trees from undesirable, usually overtopping, competing vegetation.

Reserve Trees. Live trees, pole-sized or larger, retained in either a dispersed or aggregated manner after the regeneration period under the clearcutting with reserves, seed-tree with reserves, shelterwood with reserves, group selection with reserves, or coppice with reserves regeneration methods.

Salvage Cutting. The removal of dead trees or trees being damaged or dying due to injurious agents other than competition, to recover value that would otherwise be lost.

Sanitation Cutting. The removal of trees to improve stand health by stopping or reducing actual or anticipated spread of insects and disease.

Seed Cut. A type of cut that prepares the seed bed and creates a new age class in an even-aged or two-aged stand under the seed-tree or shelterwood regeneration method. Reserve trees may or may not be retained. If reserve trees are retained, it is under a two-aged method of seed tree or shelterwood regeneration methods.

Seed-Tree Regeneration Method. A even-aged regeneration method in which a new age class develops from seeds that germinate in fully-exposed micro-environments after removal of the previous stand, except for a small number of trees left to provide seed. Seed trees are removed after regeneration is established. The cutting of all trees except for a small number of widely dispersed trees retained for seed production and to produce a new age class in fully exposed microenvironment. Under an even-aged method, seed trees are usually removed after regeneration is established. Under a two-aged method (seed tree with reserves), some, or all of the seed trees are retained after regeneration has become established to attain goals other than regeneration.

Seed-Tree Removal Cut. A final removal cut that releases established regeneration from competition with seed trees after they are no longer needed for seed under the seed-tree regeneration method. Reserve trees are retained during the removal cut if it is a sequence of the seed-tree with reserves regeneration method.

Seed Tree Regeneration Method with Reserves. A seed-tree regeneration method in which some or all of the seed trees are retained after regeneration has become established to attain goals other than regeneration. This method creates an even-aged stand or a two-aged stand if sufficient trees are reserved.

Seed Tree Final Cut with Reserves. Under the two-aged method, seed tree regeneration method, removal of some of the remaining crop trees (seed trees) after regeneration is established. Some seed trees are retained to attain goals other than regeneration.



Shelterwood Regeneration Method. A method of regenerating an even-aged stand in which a new age class develops beneath the moderated micro-environment provided by the residual trees. When the shelterwood regeneration method is employed, the sequence of treatments can include three distinct types of cuttings: 1) an optional preparatory cut to enhance conditions for seed production; 2) a shelterwood seed cut (establishment cut) to establish a moderated micro-environment, prepare the seed bed, and create a new age class, and 3) a shelterwood removal cut to release established regeneration from competition with the overwood. Cutting may be done uniformly throughout the stand (uniform shelterwood), in groups or patches (group shelterwood), or in strips (strip shelterwood).

Shelterwood Removal Cut. A final removal cut that releases established regeneration from competition with shelter trees after they are no longer needed for shelter under the shelterwood regeneration method. Reserve trees are retained during the final removal cut if it is a sequence of the shelterwood with reserves regeneration method.

Shelterwood with Reserves Regeneration Method. A regeneration method in which some or all of the shelter trees are retained to attain goals other than regeneration. This method creates an even-aged stand or a two-aged stand if sufficient trees are reserved.

Single Tree Selection Regeneration Method. An uneven-aged method where individual trees of all size classes are removed more or less uniformly throughout the stand, to promote growth of remaining trees and to provide space for regeneration.

Spatial Diversity\*. A variable spacing of individual trees or groups of trees.

Stand. A contiguous group of trees sufficiently uniform in age class distribution, composition, and structure, and growing on a site of sufficiently uniform quality, to be a distinguishable unit, such as mixed, pure, even-aged, and uneven-aged stands. A stand is the fundamental unit of silviculture reporting and record-keeping. Stand may be analogous to Activity Unit.

Stand Composition. The proportion of each tree species in a stand expressed as a percentage of the total number, basal area, or volume of all tree species in the stand.

Stand Clearcutting. Under an even-aged method a type of clearcutting where removal of essentially all trees in the previous stand produced a fully exposed microclimate for the development of a new age class. Under a two-aged method, varying numbers of reserve trees are not harvested to attain goals other than regeneration.

Stand Density. A quantitative measure of stocking expressed either absolutely in terms of number of trees, basal area, or volume per unit area or relative to some standard condition. A measure of the degree of crowding of trees within stocked areas commonly expressed by various growing space ratios.

Strip Clearcutting. A type of clearcutting involving strip cutting in two or more entries, separated by a few years, resulting in an even-aged or two-aged stand under the clearcutting regeneration method. Reserve trees may or may not be retained. Under an even-aged method, a modification of the clearcutting method where alternate or progressive strips are

clearcut in an individual stand boundary in two or more entries. Under a two-aged method, varying numbers of reserve trees are not harvested in the strips, to attain goals other than regeneration.

Succession. The gradual supplanting of one community of plants by another.

Thinning. A cultural treatment made to reduce stand density of trees primarily to improve growth, enhance forest health, or to recover potential mortality. Includes crown thinning (thinning from above, high thinning), free thinning, low thinning (thinning from below), mechanical thinning (geometric thinning), and selection thinning (dominant thinning).

Two-Aged Method. Regeneration and maintenance of stands with two age classes. The resulting stand may be two-aged or tend towards an uneven-aged condition as a consequence of both an extended period of regeneration establishment and the retention of reserve trees (green trees) that may represent one or more age classes.

Two-Aged Stand. A growing area with trees of two distinct age classes separated in age by more than plus or minus 20 percent of rotation.

Two-Aged System. A planned sequence of treatments designed to regenerate or maintain a stand with two age classes.

Uneven-aged Methods. Regeneration and maintenance of stands with a multi-aged structure by removing some trees in all size classes either singly or in small groups or in strips.

Uneven-aged Stand. A stand of trees of three or more distinct age classes, either intimately mixed or in small groups.

Uneven-aged System. A planned sequence of treatments designed to regenerate or maintain a stand with three or more age classes (see single-tree selection, and group selection regeneration methods).

Variable Density\*. Cutting of trees to increase spacing and accelerate growth of remaining trees, to increase variable spacing of remaining trees.

Visual Mosaic\*. Visual mosaic is a variety of plant communities across a landscape. Communities contain a variety of species, sizes, ages, textures, and densities of vegetation.

Weeding. A release treatment in stands not past the sapling stage that eliminates or suppresses undesirable vegetation regardless of crown position.

## Bibliography

American Pulpwood Association and American Forest and Paper Association. ***Forestry Aesthetics Guide: Image and Opportunity***. Rockville, Maryland, circa 1999.

Helms, John A., ed. ***The Dictionary of Forestry***. Bethesda, MD: The Society of American Foresters, 1998.

New Hampshire Division of Forests and Lands. ***Good Forestry in the Granite State: Recommended Voluntary Forest Management Practices for New Hampshire***. Concord: The Society for the Protection of New Hampshire Forests, 1977.

*The Public Response to Harvest Practices in British Columbia at the Landscape and Stand Scale.*  
<http://www.for.gov.bc.ca/hfd/pubs/Docs/Mr/Rec038.htm>

US Department of Agriculture. Agriculture Handbook 701. ***Landscape Aesthetics: A Handbook for Scenery Management***. 1995.

US Department of Agriculture. Agriculture Handbook 462. National Forest Landscape Management, v. 2, chapter 1: ***The Visual Management System***. 1974.

US Department of Agriculture. Agriculture Handbook 478. National Forest Landscape Management, v. 2, chapter 2: ***Utilities***. 1975.

US Department of Agriculture. Agriculture Handbook 484. National Forest Landscape Management, v. 2, chapter 3: ***Range***. 1977.

US Department of Agriculture. Agriculture Handbook 483. National Forest Landscape Management, v. 2, chapter 4: ***Roads***. 1977.

US Department of Agriculture. Agriculture Handbook 559. National Forest Landscape Management, v. 2, chapter 5: ***Timber***. 1980.

US Department of Agriculture. Agriculture Handbook 608. National Forest Landscape Management, v. 2, chapter 6: ***Fire***. 1985.

US Department of Agriculture. Agriculture Handbook 617. National Forest Landscape Management, v. 2, chapter 7: ***Ski Areas***. Circa 1985.

## Frequently-Asked Questions and Best Management Practices

### **Q: *How do forest plans influence scenery?***

**A:** Forest Plans set the goals, desired conditions and objectives of the forest for a certain period of time. This direction can continue the same type of management or can change it altogether, possibly even going from a timber production area to an old growth area. It does not however change how important scenery is to people or where those areas of high scenic interest are. The integrated approach used during forest planning helps ensure that all the resources, including aesthetics, is properly considered and included. Rules governing how forest plans are completed are ever changing and future planning rules may be different.

### **Q: *What is the timeline for meeting the SIO?***

**A:** Along with defined management direction (Retention, Partial Retention, etc.), the Visual Management System offered specific timeframes. Consult the Big Eye Book (*National Forest Landscape Management, volume 2, chapter 1: The Visual Management System, pgs 30-35*) for "Duration of Visual Impact." (R: Immediate; PR: within 1 year; M: within 1 year or based on regional guidelines.) See Appendix H in *Landscape Aesthetics* for the crosswalk between the VMS and the Scenery Management System (SMS): High/Retention; Moderate/Partial Retention; Low/Modification.

Some of the Southern Region's Forest Plans include **Scenery standards** for each Prescription; the text reads: "*Management activities are designed to meet the following SIO, which vary by inventoried scenic class.*"

If the project can't meet the SIO within the recommended timeframe, the Scenery Specialist needs to say that it doesn't and when it will. An exception to these timeframe examples is the case of **Vegetative Restoration**. A management prescription might call for native plant communities, but an area might be dominated by non-natives like various pine species. In this case, the Scenery Specialist could explain that the SIO will be met long term (5-10 years).

### **Q: *What mitigation can I use if prescribed harvest unit includes a ridgeline?***

**A:** Locate unit boundaries one tree-height below a ridgeline, especially where silhouetted against the sky. Moving the upper boundary below the ridge eliminates the "Mohawk" or thin-timber effect along ridges.

### **Q: *What mitigation can I use to help conceal views of logging roads and landings?***

**A:** If viewed upslope, or from below the prescribed stand, retain screening trees one tree-height below roads and landings. If viewing down slope, or from above the prescribed stand, retain screening trees one tree-height above roads and landings and/or prescribe a higher leave basal area.

### **Q: *How can I mitigate views of cable landings?***

**A:** Retain screening trees one tree height below cable landing. Prescribe screening so only one lane of cable corridors is visible from any given viewing platform. Prevent buildup of slash below the landing, by scattering or other technique.

**Q: What mitigations could I recommend if vegetation treatments include herbicides?**

**A:** Disclose the effects in the Environmental Analysis or other document. Determine if unmitigated effects require mitigations to protect scenery. If herbicide is applied during leaf-on, brown leaves are likely to remain 6 months or more, depending on species and climate. Dead vegetation could remain standing for a period of time, then could fall down, creating a pile of untreated slash.

**Q: What are some ways to get rid of slash, especially in “seen area” immediate foregrounds and foregrounds of Concern Level 1 corridors where SIOs are Very High or High?**

**A:** If you need to completely remove slash/logging residue from the site, prescribe chip-and-haul or piling slash and advertising for removal as firewood. To treat on-site, prescribe chipping, lopping-and-scattering, burning or crushing with mechanical equipment. Special residue management also includes felling of dead, dying, broken and leaning trees in the foreground area. (Reference: USDA Forest Service. Agriculture Handbook No. 559. *National Forest Landscape Management*, volume 2, chapter 5: *Timber*, p. 137.)

**Q: Are there any special slash or residue treatments during Crop Tree Release?**

**A:** Crop Tree Release involves selecting specimen trees of a certain species and removing competing trees within a designated radius from their trunks, usually about 20 feet. This is generally done with chain saw slash-down. Over the long term, this practice can have positive effects on an area’s scenery. However, in the short-term, it can be unsightly. During the process of removal, it is possible that some stems will not fall to the ground; some might be caught at 30 – 60degree angles in the tops of adjacent trees. Some trees may fall all the way, but their tops and branches might extend more than four feet from the ground. Slash treatment may be needed along certain seen areas of Concern Level 1 and 2 travelways and trails, particularly if Scenery is a valued resource in the area. Depending on location, visibility and constituent interest in scenery, the scenery resource specialist may prescribe treatments; these might include residue treatments within a designed distance of the travelway (for example, a tree-length buffer OR 50 – 100 feet OR the immediate foreground), removal or all slash or cutting slash to within 2 or 4 feet of the ground. Stump height might be prescribed at 6 inches or less.

**Q: In what circumstances can a temporary SIO of Rehabilitation be used?**

**A:** If an area’s existing scenic integrity is lower than the planned objective and/or if the area contains visible disturbances that detract from the natural or socially valued appearance, due to natural or human-caused alterations, the Scenery Resource Specialist may choose to assign a short-term SIO of Rehabilitation in consultation with an interdisciplinary team. Landscape Aesthetics defines rehabilitation as “a short term management goal used to return a landscape with existing visual impacts and deviations to a desired level of scenic quality formerly found in the natural landscape.” The Big Eye Book suggests that rehabilitation may be achieved through alteration, concealment or removal of obtrusive elements. (*National Forest Landscape Management*, volume 2, chapter 1: *The Visual Management System*, pg 40).

**Q: When might I recommend increasing the prescribed residual basal area?**

**A:** Along Concern Level 1 and 2 travelways or viewing platforms, a basal area of 30 s.f. leave of greater may be needed to protect and/or enhance scenery resources. Other mitigations might include:

- Leaving trees with well-formed crowns, which may have multiple benefits for wildlife such as hard mast production and denning potential
- Prescribing an uncut buffer of 50 – 100 or more feet, depending on terrain and visibility, with undulating edges along the main harvest unit
- Prescribing a thinned buffer (40 - 60 s.f.) that decreases in basal area until it is feathered into the main harvest unit.
- Using Visual Simulation from key viewing platforms to illustrate the effects of harvesting with and without increased basal area as mitigation.

Here is a source for some examples of Visual Simulations:

<ftp://ftp2.fs.fed.us/incoming/nfsnc/ecrews/globe/>

**Q: *In what circumstance might I need a Visual Simulation for a project?***

**A:** Visual simulations provide graphic representation of the effects of a project on the scenery resource. Consider using if your project contains high visibility viewsheds from major corridors, if the SIOs and/or Scenic Classes warrant special attention, if the project contains major human-constructed elements such as cell towers, wind turbines, power lines, mining operations, etc., and/or if there is a question about how a road or a regeneration treatment will appear on the landscape. Visual simulation is a powerful analysis tool that is fairly expensive to implement, so make sure your project warrants the cost and time. Often simulations are not created for areas with Low Scenery Integrity Objectives (or, under the VMS, classified as “Modification.”)

**Q: *It seems as though only the Low SIO allows for timber management.***

**A:** The SIO of low is often an appropriate place for timber management. That doesn’t mean that trees can’t be harvested for a variety of reasons in other SIO’s (Moderate and High and occasionally in Very High). Forest management direction on what is the most appropriate place for timber management can be found in Forest Plans, Area Analyses, Watershed Assessments, and Environmental Analysis (EAs). These analyses will utilize a multi-disciplinary approach and will include the scenery as well as multiple resource concerns.

**Q: *How flexible are timber contracts in being able to do these treatments? For example, can leave trees be marked so as not to be visible from a high-visibility trail? What if I specify slash is to be cut to within 2-4 feet off the ground in some areas or removed altogether?***

**A:** Timber contracts are flexible and can accommodate the treatments covered in this treatment list. Usually, the TMA (Timber Management Assistant) is responsible for making sure that contracts accommodate the mitigation that is covered in the NEPA documents for each timber sale. In the example case, although USUALLY leave trees are marked on all sides (or completely banded) so the operator will not accidentally cut the tree, it is possible to only mark on one side. The TMA would make sure the operator is aware that in some areas there are special circumstances. This same principle applies to the slash treatment or cutting stumps to within 6 inches of the ground.

**Q: *There are some vegetative conditions that make meeting the mitigations harder. For instance, when clearing heavy rhododendron for TSI (timber stand improvement) it is very difficult to treat slash to 2-feet off the ground. How can that be handled?***

**A:** Some treatments will require more intensive work than others, including hand work. It is important in areas where concern for scenery is high to carefully consider all the options, including chipping, burning, lop and scatter or total removal. It may be possible to vary the

treatment even within the area to achieve a more natural appearance, like total removal in some parts and leaving some parts with two feet of slash. Projects often have areas like these that require hard thought on how to accomplish the desired goals. Collaboration with silviculturists and foresters can lead to new thoughts and way to get all the goals accomplished.

**Q: *What treatment do I select if there are several that fit? Some examples are: (1) if I was creating “Early Successional Habitat,” could I use recommended treatments for creating “Field Successional Variety and Open Areas” or (2) If I am interested in creating Spatial Diversity or variable density in an area, do I have to use the acreage recommendations for the area’s SIO?***

**A:** Select the treatment that applies to your project’s purpose and need. Is your project harvest-related or is it initially intended to be an enhancement? Don’t confuse treatments with mitigation.

**Q: *If I am conducting a prescribed burn in a visually sensitive area, what can I do to retain its high scenic quality?***

**A:** Timing is important. Consider burning only in the spring prior to “green-up,” to keep the area from looking burned for the remainder of the year.

**Q: *For a specific project, how can I summarize the treatment tables to show recommended treatments to other specialists and team members?***

**A:** Use the Excel version and sort the table to represent just the Management Activities that are anticipated or prescribed. You’ll need to know the project area’s prescription(s) so you can sort for the correct SIOs. The specialized table can be provided up front during conceptual phases of a project. Note: the Excel version will be published by Spring 2008.

**Q: *What is Visual Absorption Capacity and how / when should it be used?***

**A:** Visual Absorption Capacity, or VAC, is an indicator of the relative ability of any landscape to accept human alteration without loss of landscape character or scenic condition. VAC can help specify the most efficient location for a human alteration on the landscape, helping to make project accomplishment easier, at a lower cost and with minimal reduction in scenic quality. Terrain (slope) and vegetation cover are the two most important factors available in determining how much VAC is available on a given landscape. Unlike with the inventory for determining scenic quality objectives (SIOs), vegetation cover is used in determining VAC and, along with the slope, aids in making the perception of an activity more subtle than it really is. A landscape architect can provide guidance in determining a landscape’s visual absorption potential of a management activity.

**Q: *Once my team and I have selected appropriate treatment guides for a project, would there need to be any changes in their wording to be used for definitive mitigation or included in work contracts?***

**A:** Remember that if any of the above treatment guides are incorporated into a project decision as mitigating measures or contract provisions, they will need to be worded as such (i.e., the wording would need to change from a suggestion to a commitment).